2010

Book Review: Why Don't Students Like School? A Cognitive Scientist Answers Questions about How the Mind Works and What it Means for the Classroom by Daniel T. Willingham

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How many times have you stood before a class of freshman and been reminded of the scene in *Ferris Bueller's Day Off* where the teacher pleads with a class of uninterested, preoccupied students to answer a simple question and asks, "Anyone. **Anyone**?" You are not alone. Help is at hand in a slim, easy to understand book describing how students' minds really work and perhaps most importantly, how you can apply this knowledge to your situation and improve your teaching.

Daniel Willingham is a cognitive scientist and professor of psychology at the University of Virginia. His research focuses on the application of cognitive psychology to K-12 education but is also applicable to college students. In *Why Students Don't like School*, Willingham maintains that every day — in classrooms, libraries and homes — librarians, teachers and parents are operating on out-of-date assumptions and an incomplete understanding of teaching and learning, such as about the theory of different styles of learning. Prepare to take a hard look at some of your own beliefs about teaching and learning, and learn how to improve your teaching as a result.

The book's style and organization models the processes he is recommending for the classroom. In each chapter he explains a basic cognitive principle, followed by a discussion of the mythology or a misconception associated with the principle. To further illustrate, he presents a problem or an exercise, challenging the reader to solve it. His process reinforces the concept and reveals the reader's own prior knowledge or understanding. This self-discovery device can be eye opening and persuasive. Finally and most importantly, each chapter includes specific suggestions for incorporating the principle in the classroom. The principles are a series of "truths" about learners and effective teaching skills, and as such, have application to library instruction.

For example, in Chapter 1: "Why don't students like school?" The cognitive principle he illustrates is that people are naturally curious, but it does not necessarily follow that they are naturally good thinkers. He advises teachers to be sure to take the necessary time to consider the importance of answering all students' questions, however long it might take, before moving on. Teachers must ensure students have the underlying factual knowledge to understand the material being presented—even if that means incorporating a lecture into the class. It doesn't mean solely (or even mostly) doing "rote" learning, but students need to know the fundamentals before they can move on to any larger concepts – don't move on too quickly or assume too much. He offers suggestions to determine what students already know (or don't know) and how to attract and maintain their interest. To relate this to examples from library instruction, one might ask how many students in a class have used a specialized database to search for resources; sometimes only a hand or two goes up. Next ask how many have used Google to search. Frequently 100% of the hands rise. Then, use the knowledge students have in searching Google to compare and contrast with a database such as PsycINFO. The students must have an understanding of how a database works before proceeding with difficult concepts such as Boolean searching. Without being aware of the knowledge base you are starting from, students will quickly become bored and assume the glazed look captured so well in *Ferris*.

Chapter 7 poses the question, "How should I adjust my teaching for different types of learners?" If, like me, you are one of the many individuals who believe that there are three types of learners (auditory, visual, and kinesthetic), prepare to be persuaded otherwise. In fact, you may not even remember where you first learned about learning styles; they are part of what he calls the common wisdom of learning. Unfortunately, the concept is not backed up by research. He does acknowledge that different learning abilities exist but distinguishes them from styles. The principle to apply is that in fact, "…children are more alike than different in how they think and learn." This does not mean you have to throw out everything you are doing. It is still a good idea to use multiple approaches to get a point across — i.e., use visuals, auditory, and kinetic methods — but not to appeal to distinct learning styles. That is unnecessary. It makes good sense to vary teaching simply based on the content of what you are teaching and because, as Willingham says, "Change promotes attention."

The other chapters are equally thought provoking, and relevant to librarians as well as teachers. They are:

Ch. 2 How can I teach students the skills they need when standardized tests require only facts?

Ch. 3 Why do students remember everything that's on television and forget everything I say?

Ch. 4 Why is it so hard for students to understand abstract ideas?

Ch. 5 Is drilling worth it?

Ch. 6 What is the secret to getting students to think like real scientists, mathematicians and historians?

Ch. 8 How can I help slow learners?

Ch. 9 What about my mind?

Willingham is highly readable, scholarly without being pedantic, and entertaining as well. He holds our attention by using popular, up-to-date references throughout with diverse examples such as the Olsen twins (Kate and Ashley) and the hit television series *House*. Also, I found his organization of the lists of references at the end of each chapter, which he categorized as "less technical" or "more technical," particularly useful; I plan to employ this technique myself in the future. Additionally, the table in his "Conclusion" section at the end of the book that lists each cognitive principle, the "required knowledge about students," and "most important classroom implications" serves as an excellent way to refer back to all the information quickly. The advice is practical and easily applicable to classroom teachers as well as librarians planning instruction sessions.

In LOEX Quarterly's vol 36, issue 2, Nancy Falciani-White reviewed *Brain Rules: 12 Principles for Surviving and Thriving Work, Home, and School* by John Medina. Medina describes how the brain works and the implications for teaching, while Willingham's focus is on why cognitive principles are important to learning and what do about it once you know how it works. The Willingham title complements and extends the information in Medina's book and both are useful additions to education or psychology collections. Prepare to be challenged, inspired and changed.

Post-script:

If you would like to read more of his research Willingham writes a regular column in the journal *American Educator*, "Ask the cognitive scientist." The question addressed in the Summer 2010 issue was particularly relevant for LOEX readers, "Have technology and multitasking rewired how students learn?" (http://www.aft.org/pdfs/americaneducator/summer2010/Willingham.pdf) Another myth "students have developed the ability to multitask" is exploded.

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search to find more relevant information. Additionally, data collected in 2009 from students who completed the feedback questions at the end of the presentation showed that 89% were more comfortable using the library, 87% were more comfortable using the library catalog, and 88% were more comfortable using article databases.

Challenges and Future Plans

The most significant challenge librarians experienced with the new presentation format was lack of familiarity with the software. As instructors have become more experienced with the presentation set-up this has become less of an issue. Some instructors have also had difficulty in covering the required information and giving the students enough time to complete their worksheets in the 50 minutes allotted. To alleviate this issue, the librarians have had to adjust the amount of time spent on each skill while still leaving time for any assessment and questions from the students. Finally, some instructors have had problems using the responses from the initial polling slides to modify their presentations on the spot to meet the needs of the students. The library will be providing training to help these presenters feel more comfortable in making these adjustments. Overall, student and faculty response to the new presentation format has been positive and we will continue to use this structure and refine it based on informal student and faculty feedback. By designing a dynamic, structured interactive presentation format, we've made the sessions more engaging and informative for both instructors and students.

References

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Appendix A

The worksheet, annotated with call-outs outlining the sequence in which the session is presented can be found at: http://www.emich.edu/public/loex/373_ApdxA.pdf